



Original Article

Fear of COVID-19 on Perturbation Among Medical Doctors

Muhammad Sajid¹, Maria Anwar Khan¹, Asim Din², Madiha Ghazanfar³, Muhammad Tariq Saeed³, Amna Hameed³, Madiha Iftikhar³, Muhammad Naveed Sheas³, Anam Zahra³, Omair Ali Shah³

¹Institute of Southern Punjab University, Multan, Pakistan

²The Children's Hospital & University of Child Health Science, Lahore, Pakistan

³Ibadat International University, Islamabad, Pakistan

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*Corresponding Author:

Madiha Ghazanfar

Ibadat International University, Islamabad, Pakistan
 madihaghazanfar409@yahoo.com

ABSTRACT

Virus is a microscopic infectious disease causing agent, coronavirus is novel positive sense RNA virus causing mild to severe symptoms within 14 days of infection. The first ever case of coronavirus disease 2019 (COVID-19) was reported in Wuhan city of Hubei province of China which widely spread around the world having severe impact on physical and mental health.

Objective: To explore the role of fear of COVID-19 on perturbation among medical doctors.

Methods: A quantitative research was designed by using online questionnaire based survey to obtain data through convenient sampling. The sample consisted of 201 doctors from different Public and Private Hospitals of South Punjab (Pakistan). A priori power analysis calculated by using G*power analysis 3.1.9 for correlation. The instruments used to collect the data were fear of COVID-19 Scale, emotion regulation questionnaire (ERQ) and mental health inventory.

Results: A significant positive correlation was found between fear of COVID-19, cognitive reappraisal, expressive suppression and positive effect on mental health among doctors. On comparison fear of COVID-19, anxiety, depression, and behavioural control of mental health among doctors has shown no correlation while cognitive reappraisal and expressive suppression also depicted insignificant relation with mental health. Dependent variable (expressive suppression) significantly explained by the independent variable fear of COVID-19. The result specified that dependent variable of depression is non-significantly explained by the independent variable i.e. fear of COVID-19. **Conclusions:** Our study concluded that fear of COVID-19 has shown a noteworthy impact on positive effect of mental health while COVID-19 has non-significantly effect on behavioural control.

INTRODUCTION

Virus is a microscopic infectious disease-causing agent, coronavirus is a novel positive-sense RNA virus causing mild to severe symptoms within 14 days of infection [1,2]. The first-ever case of coronavirus disease 2019 (COVID-19) was reported in Wuhan city of Hubei province of China which is widely spread around the world having a severe impact on physical and mental health [3]. Coronavirus replicated exponentially globally, figures upgraded in march 2022, over 346 million confirmed cases and over 5.5 million deaths have been reported worldwide [4,5]. Pakistan is sandwiched between Iran and China with a higher rate of trade and travel. The first case of COVID-19 was reported from Karachi on 26th February 2020 with a travel history from Iran [6]. The virus then spread

exponentially crossed the country within days and reached an alarming level causing severe consequences on Pakistan's economy [7,8]. Medical health care professionals are vital and crucial for every nation's critical infrastructure. Being at the frontline, health providers are at greater risk of exposure to deadly Covid-19. Unsafe medical conditions reflect behavioral changes and affect the mental health of those who work to save lives. Since exposure to Covid-19 viral infection and lack of effective treatment not only brought the high mortality rate but also resulted in multiple psychological sufferings such as anxiety, adjustment disorder depression, fear, stigma, stress, trauma, etc. are reported in the population as well as healthcare professional workers [9,10]. Conditions and

degrees of psychological problems vary depending on the medical and social environment. Various studies have shown medical workers confronted with this emergency who work in such exhausted unpredictable and uncertain stress full situations are facing physical and psychological stress due to exposure to high risk of infection, social isolation, sadness, sleeping disorder, lack of contact with family members, emotional illness and tension have an obvious adverse effect on mental health [11-13]. In the context of COVID-19 pandemic, heading to the psychological well-being problems in clinical workers is hence significant for the better ignorance and control of the pandemic[14,15]. The current survey was performed to find the role of fear of covid-19 on perturbation among doctors.

METHODS

A quantitative research design was employed in the online survey method by using questionnaire to obtain data through convenient sampling. The current study consisted of paramedical doctors (N=201) from different Public and Private Hospitals in South Punjab Pakistan through convenient sampling during the period of March 2021 to January 2022. Initially, 9 participants were taken additionally to overcome attrition rate and biasness. A priori power analysis was calculated by using G*power analysis 3.1.9 for correlation [16], to confirm that the experimentation has sufficiently powered for analysis or sufficient sample size. The total required sample size was evaluated with effect size 0.26, power 0.95 and alpha error (0.04). Following Tools were used in this study, Fear of COVID-19 Scale, Emotion Regulation Questionnaire (Erq), Mental Health Inventory (MHI-18)

	Number of Particip	Percentage (%)
Gender		
Male	46	22.9
Female	155	77.1
Age		
≤ 30 years	67	33.3
> 30 years	134	66.7
Sector		
Government	162	80.6
Private	39	19.4
Education		
Undergradua	156	77.6
Postgraduat	45	22.4

Table 1: Characteristics of Study Participants (N=201)

The result showed that female doctors were more actively working during COVID-19 with a maximum age of 67 years.

	Mean	S.D.		COVID -19	Cognitive Reappraisal	Expressive Suppression	Anxiety	Depression	Behavioural Control	Positi ve affect
Fear of COVID -19	18.77	5.690	Pearson Correlation	1	.310**	.342**	-.043	-.048	-.092	-.212**
Cognitive Reappraisal	29.50	5.226	Pearson Correlation			.574**	-.080	-.032	.105	.055
Expressive Suppression	19.27	4.244	Pearson Correlation			1	-.061	-.139*	.101	.111
Anxiety	19.43	4.109	Pearson Correlation				1	.605**	-.594**	.315**
Depression	18.53	3.788	Pearson Correlation					1	-.490**	.063
Behavioural Control	16.31	3.605	Pearson Correlation						1	.286**
Positive Affect	14.28	2.429	Pearson Correlation							1

Table 2: Mean, SD, & Correlation Matrix between fear of COVID-19, Cognitive Reappraisal, Expressive Suppression, anxiety, Depression, Behavioural Control and Positive Affect (N=201), *P < 0.05, **P < 0.01, P > 0.05

Results in Table 2 showed a significant Positive correlation between fear of COVID-19, Reassessment of cognition, suppression of expression, and positive impact on mental health among doctors. Moreover, results showed an insignificant negative correlation between fear of COVID-19 and anxiety, depression, and behavioural control of mental health among doctors. Results also indicated that cognitive reappraisal and expressive suppression have insignificant relation with mental health except expressive suppression has significant negative relation with depression of mental health among doctors.

Variable	B	Std Error	Beta	T	P	R ²	AR ²	F
Constant	24.128	1.220		19.7	.000***			
COVID-19	0.287	0.062	0.310	4.606	.000***			
Expressive Suppression						0.117	0.11	26.43
Constant	14.45	0.979		14.76	.000***			
COVID-19	0.25	0.050	0.342	5.142	.000***			
Anxiety						0.002	-0.002	0.372
Constant	20.026	1.008		19.86	.000***			
COVID-19	-0.031	0.051	-0.043	-0.610	.543			
Depression						0.002	-0.003	0.462
Constant	19.14	0.929		20.607	.000***			
COVID-19	-0.032	0.047	-0.048	-0.679	.498***			
Behavioural Control						0.008	-0.003	1.693
Constant	17.410	0.883		19.725	.000***			
COVID-19	-0.059	0.047	-0.092	-1.301	.195***			
Effect on Mental Health of Doctors						0.045	0.040	9.395
Constant	12.57	0.563		21.568	.000***			
COVID-19	0.091	0.030	0.212	3.065	.002***			

Table 3: Standard Regression Model showing impact of fear of COVID-19 Cognitive reappraisal *P < 0.05, **P < 0.01

Table 3 revealed that the depending cognitive reappraisal variable is 9.2% due to the independent COVID-19 fear indicated by the R² = .096 value. Significant F-value(1, 199) = 21.218 = **p < .001). In Table 3 dependent variable of behavioural control is .3% as indicated by the value of R² = .008 whereas dependent variable of positive effect on mental health is 4 % which is significantly explained **p < .001.

DISCUSSION

Coronavirus pandemic exacerbated anxiety and depression symptoms among individuals due to several reasons such as lockdown, associated isolation, fear of worthlessness, and fear of infection [17]. There was an insignificant negative correlation between fear of COVID-19 and anxiety, depression, and behavioural control of mental health among doctors. Results also indicated that

cognitive reappraisal and expressive suppression have insignificant relation with mental health except expressive suppression has significant negative relation with depression of mental health among doctors. COVID-19 pandemic had a significant impact on the psychological well-being of doctors in Pakistan. There is a critical need to keep them safe during this challenging time so that they could continue to combat with potential force. A deliberate effort need to be initiated to ensure effective strategic planning and distribution of resources to give the doctors peace of mind [18]. Cognitive reappraisal mediated the links between stressors and mental health. The mechanisms of perception of stress increase anxiety in isolated COVID-19 individuals are better understood by Chen Xu, 2020. Similar to our results Xu et al., 2020 showed a significant positive correlation between fear of COVID-19, cognitive reappraisal, expressive suppression and positive effect of mental health among doctors [19]. This finding is consistent with recent studies on the link between high-level occupational stressors and mental health problems [20,21]. Current studies have investigated the association between reassessment and expression suppression and psychopathological intervention, especially for stress-related responses. In general, expression suppression was higher and reassessment was lower with self-reported stress-related symptoms. Therefore, fear is a central emotion, but it seems to appear in response to recent pandemics and other life-threatening events. The conclusions of the second model showed that fear of COVID-19 had positive effects both directly and through depression, anxiety, and stress. The result of COVID-19 was comparable with the other studies and its psychological effects [22,23]. The dependent variable of anxiety is .2 % explained by the independent variable fear of COVID-19 as indicted by the value of $R^2 = -.002$. An insignificant F-value for the standard regression model ($F(1, 199) = .372, p > .001$) $p > 0.05$ also depicted that model insignificantly explains the outcome variable Table 3. Further Satici et al., 2020 found the negation of the fear of COVID-19 to life satisfaction (another concept associated with positivity) [24]. At the same time, there was a positive correlation between COVID-19 fear and depression, which showed anxiety and stress. Harper et al., 2020 found positive linkages between depression, anxiety and COVID-19 fear. More than half of respondents found that COVID-19 has moderate to severe psychological effects in China About one third have been reported to be moderately too severe [25]. The COVID-19 concerns predicts depression these results are aligned with findings of Koutsimani et al., 2019 who showed that more anxious people are more likely to become burnout [26]. Also, the parents who suffered from higher stress in response to COVID-19 and who thought they were infected

were more likely to be burnout-infected in all four fields. The findings indicated that fear of COVID-19 has an impact on anxiety, behaviour and depression [27]. A significant impact of fear of COVID-19 on positive effect of mental health perturbation among doctors was shown in results. Blasco Belled et al., 2020 concluded that positive and influential individuals may look at the "big picture" and look for relevant information. They avoid focusing on specific details that impede problems or preventative actions [29]. Positive effects may help individuals apply information processing strategies to improve life satisfaction in the event of COVID-19.

CONCLUSIONS

It is concluded that fear of COVID-19 has shown a noteworthy impact on positive effect of mental health while COVID-19 has non-significantly effect on behavioural control. Positive effects may help individuals apply information processing strategies to improve life satisfaction in the event of COVID-19.

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